

FSS

HYDROGEN REFUELING STATION



Refueling Pressure
700 bar
and 350 bar



Supply
On-site storage, tube trailer,
electrolyzer



Flow Capacity
>1000 kg/day

► The Hydrogen Refueling Station type FSS (Full-Sized Station) is designed as a public Fast Fill Hydrogen Refuel Station (HRS) for the developing hydrogen mobility market. Adapting to the predicted future of hydrogen mobility refueling demand, Resato has made his compression technology available by means of large capacity public Hydrogen Refuel Stations. Having its origin in high demand 24/7, high flow/high pressure hydrogen testing applications, refuel station owners benefit from reliability, focus on OPEX and after-sales support. The Resato FSS-series public refuel stations provide a regular petrol refuel experience for hydrogen vehicles. With a standard capacity of 1000 kg/day already available at low supply pressures, the design is in the top range of commercially available HRS worldwide. The high compression capacity available at low pressures allows continuous back to back refueling of LDV's and multiple HDV refuelings in a short time frame.

| Benefits & Features

- Reliable filling is made possible by the use of a Resato compression technology for 700 and/or 350 bar refueling
- Flexible hydrogen supply via bottle rack system, tube trailer, electrolyzer or pipeline. Supply pressure range between 10 and 500 bar.
- Refueling according the SAE 2601 protocol
- IFSF payment protocol for connection to cash registersystems.
- Future proof investment, ready for hydrogen market >2025
- Energy efficient
- Profitable business case due to high refueling capacity and focus on OPEX
- Cooling system meeting the market green expectation (GWP <3)

| Application Areas

- Refueling of passenger cars (LDV)
- Refueling of trucks (HDV)
- Refueling of street cleaning vehicles and garbage trucks
- Refueling of buses



Technical Information

FSS

Item	Specification
Outlet Pressure Range	700 bar and/or 350 bar
Inlet Pressure Range	10-500 bar
Flow Capacity Range	> 20 kg/hr @ 10 bar supply pressure > 35 kg/hr @ 30 bar supply pressure > 45 kg/hr @ 50 bar supply pressure
Pressure Technology	Resato VOB-series electro-hydraulic driven boosters
Power Supply	400 VAC/50Hz
Ambient conditions	-20° to 40° C environment
Regulations	Design in accordance to the European regulations
Certifications	CE marked, ATEX certified
Storage	Multibank storage modules

Dispenser

	700 bar	350 bar (optional)
Fueling Quantity	1-7 kg	~30 kg effective
Back-to-back capacity	Continuous based on supply	1 HDV (or multiple)
Fueling Time	Approximately 3 minutes	As per protocol
Fueling Protocol	Quick refueling according to SAE2601-1 H70T40 Cat. B	Refueling according to SAE2601-2
Fueling Hose	TK17-H70 with communicating nozzle	TK17-H35 with communicating nozzle
Mass Measurement	Coriolis mass flow meter	Coriolis mass flow meter
Display	Dispenser with HMI integrated screen	Dispenser with HMI integrated screen
Sales Interface	IFSF (International Forecourt Standards Forum)	IFSF (International Forecourt Standards Forum)
Placement	Up to 50 meters from booster station	Up to 50 meters from booster station

Options

- Buffer capacity extension 350 bar refueling
- Additional dispenser
- Hydrogen supply bypass

Since 1991.

Resato is a Dutch provider of smart high pressure solutions with the aim to increase the productivity of its worldwide customers. We develop and manufacture waterjet cutting systems as well as components and systems for pressure testing, injection, and controlling up to 14,000 bars with the mission to meet and exceed the expectations of our customers. Since 2017, we are developing hydrogen filling solutions and since 1998 hydrogen high pressure testing equipment.

YOUR HIGH PRESSURE EXPERT.

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Need more advice?

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